



1600

RAW SEQUENCE LISTING

DATE: 09/17/2004

PATENT APPLICATION: US/08/957,709A

TIME: 16:04:58

Input Set : A:\116-01.txt

Output Set: N:\CRF4\09172004\H957709A.raw

3 <110> APPLICANT: Holly, Hogrefe
 4 Connie, Hansen J
 6 <120> TITLE OF INVENTION: Polymerase Enhancing Factor (PEF) extracts, PEF protein
 7 complexes, isolated PEF protien, and methods for purifying and
 8 identifying them
 10 <130> FILE REFERENCE: 04121.0116-01000
 12 <140> CURRENT APPLICATION NUMBER: 08/957,709A
 13 <141> CURRENT FILING DATE: 1997-10-24
 15 <150> PRIOR APPLICATION NUMBER: 08/822,774
 16 <151> PRIOR FILING DATE: 1997-03-21
 18 <160> NUMBER OF SEQ ID NOS: 104
 20 <170> SOFTWARE: PatentIn version 3.3
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 15
 24 <212> TYPE: PRT
 25 <213> ORGANISM: Pyrococcus furiosus
 28 <220> FEATURE:
 29 <221> NAME/KEY: misc_feature
 30 <222> LOCATION: (1)..(2)
 31 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 33 <220> FEATURE:
 34 <221> NAME/KEY: misc_feature
 35 <222> LOCATION: (13)..(15)
 36 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 38 <400> SEQUENCE: 1



W--> 40 Xaa Xaa Leu His Val Lys Leu Ile Tyr Ala Thr Xaa Xaa Xaa
 41 1 5 10 15

44 <210> SEQ ID NO: 2
 45 <211> LENGTH: 15
 46 <212> TYPE: PRT
 47 <213> ORGANISM: Pyrococcus furiosus
 50 <220> FEATURE:
 51 <221> NAME/KEY: misc_feature
 52 <222> LOCATION: (1)..(3)
 53 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 55 <220> FEATURE:
 56 <221> NAME/KEY: misc_feature
 57 <222> LOCATION: (7)..(8)
 58 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 60 <220> FEATURE:
 61 <221> NAME/KEY: misc_feature
 62 <222> LOCATION: (10)..(10)
 63 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

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65 <220> FEATURE:
66 <221> NAME/KEY: misc_feature
67 <222> LOCATION: (12)..(12)
68 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
70 <220> FEATURE:
71 <221> NAME/KEY: misc_feature
72 <222> LOCATION: (14)..(15)
73 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
75 <400> SEQUENCE: 2
W--> 77 Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Arg Xaa Glu Xaa Leu Xaa Xaa
      78 1           5           10           15
81 <210> SEQ ID NO: 3
82 <211> LENGTH: 35
83 <212> TYPE: PRT
84 <213> ORGANISM: Pyrococcus furiosus
87 <220> FEATURE:
88 <221> NAME/KEY: misc_feature
89 <222> LOCATION: (1)..(1)
90 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
92 <220> FEATURE:
93 <221> NAME/KEY: misc_feature
94 <222> LOCATION: (14)..(14)
95 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
97 <220> FEATURE:
98 <221> NAME/KEY: misc_feature
99 <222> LOCATION: (16)..(16)
100 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
102 <220> FEATURE:
103 <221> NAME/KEY: misc_feature
104 <222> LOCATION: (21)..(21)
105 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
107 <220> FEATURE:
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109 <222> LOCATION: (29)..(30)
110 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
112 <220> FEATURE:
113 <221> NAME/KEY: misc_feature
114 <222> LOCATION: (32)..(35)
115 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
117 <400> SEQUENCE: 3
W--> 119 Xaa Leu Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Xaa Arg Xaa
      120 1           5           10           15
123 Leu Val Gly Lys Xaa Ile Val Leu Ala Ile Pro Gly Xaa Xaa Ala Xaa
124           20           25           30
127 Xaa Xaa Xaa
128           35
131 <210> SEQ ID NO: 4
132 <211> LENGTH: 18
133 <212> TYPE: PRT

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134 <213> ORGANISM: Pyrococcus furiosus
 137 <220> FEATURE:
 138 <221> NAME/KEY: misc_feature
 139 <222> LOCATION: (1)..(3)
 140 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 142 <220> FEATURE:
 143 <221> NAME/KEY: misc_feature
 144 <222> LOCATION: (7)..(8)
 145 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 147 <220> FEATURE:
 148 <221> NAME/KEY: misc_feature
 149 <222> LOCATION: (10)..(10)
 150 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 152 <220> FEATURE:
 153 <221> NAME/KEY: misc_feature
 154 <222> LOCATION: (12)..(12)
 155 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 157 <220> FEATURE:
 158 <221> NAME/KEY: misc_feature
 159 <222> LOCATION: (14)..(14)
 160 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 162 <220> FEATURE:
 163 <221> NAME/KEY: misc_feature
 164 <222> LOCATION: (16)..(18)
 165 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 167 <400> SEQUENCE: 4

W--> 169 Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Arg Xaa Glu Xaa Leu Xaa Glu Xaa

170 1 5 10 15

173 Xaa Xaa

177 <210> SEQ ID NO: 5

178 <211> LENGTH: 17

179 <212> TYPE: PRT

180 <213> ORGANISM: Pyrococcus furiosus

183 <220> FEATURE:

184 <221> NAME/KEY: misc_feature

185 <222> LOCATION: (1)..(1)

186 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

188 <400> SEQUENCE: 5

W--> 190 Xaa Tyr Asp Ala Val Ile Met Ala Ala Val Val Asp Phe Arg Pro

191 1 5 10 15

194 Lys

198 <210> SEQ ID NO: 6

199 <211> LENGTH: 24

200 <212> TYPE: PRT

201 <213> ORGANISM: Pyrococcus furiosus

203 <400> SEQUENCE: 6

205 Ala Asp Leu Val Val Gly Asn Thr Leu Glu Ala Phe Gly Ser Glu Glu

206 1 5 10 15

209 Asn Gln Val Val Leu Ile Gly Arg

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210          20
213 <210> SEQ ID NO: 7
214 <211> LENGTH: 17
215 <212> TYPE: PRT
216 <213> ORGANISM: Pyrococcus furiosus
219 <220> FEATURE:
220 <221> NAME/KEY: misc_feature
221 <222> LOCATION: (13)..(13)
222 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
224 <400> SEQUENCE: 7
W--> 226 Gly Ala Met Leu His His Val Lys Leu Ile Tyr Ala Xaa Lys Leu Arg
      227 1          5          10          15
      230 Lys
234 <210> SEQ ID NO: 8
235 <211> LENGTH: 18
236 <212> TYPE: PRT
237 <213> ORGANISM: Pyrococcus furiosus
240 <220> FEATURE:
241 <221> NAME/KEY: misc_feature
242 <222> LOCATION: (15)..(16)
243 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
245 <400> SEQUENCE: 8
W--> 247 Gly Ala Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Xaa Xaa
      248 1          5          10          15
      251 Arg Lys
255 <210> SEQ ID NO: 9
256 <211> LENGTH: 13
257 <212> TYPE: PRT
258 <213> ORGANISM: Pyrococcus furiosus
260 <400> SEQUENCE: 9
262 Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Leu
263 1          5          10
266 <210> SEQ ID NO: 10
267 <211> LENGTH: 16
268 <212> TYPE: PRT
269 <213> ORGANISM: Pyrococcus furiosus
272 <220> FEATURE:
273 <221> NAME/KEY: misc_feature
274 <222> LOCATION: (2)..(4)
275 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
277 <220> FEATURE:
278 <221> NAME/KEY: misc_feature
279 <222> LOCATION: (8)..(9)
280 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
282 <400> SEQUENCE: 10
W--> 284 Gly Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Lys Phe Arg Lys Glu Glu Ser
      285 1          5          10          15
      288 <210> SEQ ID NO: 11
      289 <211> LENGTH: 17

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290 <212> TYPE: PRT
291 <213> ORGANISM: Pyrococcus furiosus
293 <400> SEQUENCE: 11
295 Gly Ala Ile Leu Leu Pro Asp Trp Lys Ile Arg Lys Glu Ile Leu Ile
296 1          5          10          15
299 Glu
303 <210> SEQ ID NO: 12
304 <211> LENGTH: 16
305 <212> TYPE: PRT
306 <213> ORGANISM: Pyrococcus furiosus
309 <220> FEATURE:
310 <221> NAME/KEY: misc_feature
311 <222> LOCATION: (1)..(1)
312 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
314 <220> FEATURE:
315 <221> NAME/KEY: misc_feature
316 <222> LOCATION: (9)..(9)
317 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
319 <220> FEATURE:
320 <221> NAME/KEY: misc_feature
321 <222> LOCATION: (13)..(13)
322 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
324 <400> SEQUENCE: 12
W--> 326 Xaa Met His His Val Ile Lys Leu Xaa Tyr Ala Thr Xaa Ser Arg Lys
327 1          5          10          15
330 <210> SEQ ID NO: 13
331 <211> LENGTH: 18
332 <212> TYPE: PRT
333 <213> ORGANISM: Pyrococcus furiosus
335 <400> SEQUENCE: 13
337 Met Leu Tyr Leu Val Arg Pro Asp Trp Lys Arg Arg Lys Glu Ile Leu
338 1          5          10          15
341 Ile Glu
345 <210> SEQ ID NO: 14
346 <211> LENGTH: 23
347 <212> TYPE: DNA
348 <213> ORGANISM: Artificial
350 <220> FEATURE:
351 <223> OTHER INFORMATION: primer sequence
353 <400> SEQUENCE: 14
354 caycaygaha arythattta cgc
357 <210> SEQ ID NO: 15
358 <211> LENGTH: 23
359 <212> TYPE: DNA
360 <213> ORGANISM: Artificial
362 <220> FEATURE:
363 <223> OTHER INFORMATION: primer sequence
366 <220> FEATURE:
367 <221> NAME/KEY: misc_feature

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RAW SEQUENCE LISTING ERROR SUMMARY
 PATENT APPLICATION: US/08/957,709A

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Input Set : A:\116-01.txt
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. ~~1,2,13,14,15~~
 Seq#:2; Xaa Pos. ~~1,2,3,7,8,10,12,14,15~~
 Seq#:3; Xaa Pos. ~~1,14,16,21,29,30,32,33,34,35~~
 Seq#:4; Xaa Pos. ~~1,2,3,7,8,10,12,14,16,17,18~~
 Seq#:5; Xaa Pos. ~~1~~
 Seq#:7; Xaa Pos. ~~13~~
 Seq#:8; Xaa Pos. ~~15,16~~
 Seq#:10; Xaa Pos. ~~2,3,4,8,9~~
 Seq#:12; Xaa Pos. ~~1,8,13~~
 Seq#:15; N Pos. 9
 Seq#:18; N Pos. 67,68,69,70,71,72,73,74,75,930,931,932,933,1203
 Seq#:19; Xaa Pos. 23,24,25,311,401
 Seq#:32; N Pos. 15
 Seq#:33; N Pos. 15
 Seq#:34; N Pos. 15
 Seq#:35; N Pos. 15
 Seq#:36; N Pos. 20,66
 Seq#:37; Xaa Pos. 12,22
 Seq#:38; Xaa Pos. 7,22
 Seq#:39; Xaa Pos. 7,9
 Seq#:41; Xaa Pos. 1
 Seq#:42; N Pos. 665,684,686,697,699,700,703,740
 Seq#:43; Xaa Pos. 7,9,14,24,26,30,50,52,64,76,78,96,118,121,134,139,153,209
 Seq#:43; Xaa Pos. 213,221,228,232,233,234,237,246
 Seq#:44; Xaa Pos. 105,129,198,206,215,222,225,228,229,232,233,234
 Seq#:45; Xaa Pos. 43,60,110,117,155,162,170,180,195,222,227,229,233,234,235
 Seq#:45; Xaa Pos. 243
 Seq#:46; Xaa Pos. 23,24,25
 Seq#:51; Xaa Pos. 84,85,86,87,88,97,98,99,100,154,155,180,181,182,183,184
 Seq#:51; Xaa Pos. 185,287,288,290,311,322,323,324,325,333,348,389,390,417
 Seq#:51; Xaa Pos. 434,435,436,437
 Seq#:52; Xaa Pos. 104,105,106,107,144,145,173,197,198,294,295,340,368,369
 Seq#:52; Xaa Pos. 370,371
 Seq#:53; Xaa Pos. 1,3,4,6,7,8,9,11,12,13,14
 Seq#:72; Xaa Pos. 1,3,4,6,7,8,10,11,12,13
 Seq#:92; Xaa Pos. 167
 Seq#:104; Xaa Pos. 2,4,5,6,10,11,13,20,21,22,23,24,25,26,27,28,30,31,32,33
 Seq#:104; Xaa Pos. 34,35,41,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60
 Seq#:104; Xaa Pos. 61,62,63,65,66,67,72,74,75,78,82,84,87,88,89,95,105,111
 Seq#:104; Xaa Pos. 112,117,123,131,133,135,137,140,150,154,157,159,160,162
 Seq#:104; Xaa Pos. 163,166,171

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
 per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

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Seq#:14,15,16,17,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,37,38,39,43
Seq#:44,45,49,50,53,59,60,61,62,63,64,65,72,82,83,84,85,86,87,88,89,104

VERIFICATION SUMMARY

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Input Set : A:\116-01.txt

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L:40 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:77 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:119 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
M:341 Repeated in SeqNo=3
L:169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
M:341 Repeated in SeqNo=4
L:190 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:226 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:247 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:284 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:326 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:372 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:423 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:60
M:341 Repeated in SeqNo=18
L:491 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:16
M:341 Repeated in SeqNo=19
L:750 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0
L:768 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0
L:786 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0
L:804 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0
L:824 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0
M:341 Repeated in SeqNo=36
L:850 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
M:341 Repeated in SeqNo=37
L:879 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:0
M:341 Repeated in SeqNo=38
L:908 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:0
L:942 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
L:1018 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:660
M:341 Repeated in SeqNo=42
L:1154 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
M:341 Repeated in SeqNo=43
L:1298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:96
M:341 Repeated in SeqNo=44
L:1427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:32
M:341 Repeated in SeqNo=45
L:1500 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:16
L:1651 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:80
M:341 Repeated in SeqNo=51
L:1810 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:96
M:341 Repeated in SeqNo=52
L:1929 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53 after pos.:0
L:2217 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:0
L:2579 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92 after pos.:160
L:3303 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:104 after pos.:0
M:341 Repeated in SeqNo=104